

Power Plant Engineering MCQ Question Answer

Visit <https://competitive-exam.in> for more MCQ

Question: 1. Uranium has isotopes

Option A. U_{234}

Option B. U_{235}

Option C. U_{238}

Option D. All of these

Question: 2. The fuel needed, with reflector in nuclear power plant, in order to generate sufficient neutrons to sustain a chain reaction, would be

Option A. More

Option B. Less

Option C. Same

Option D. Zero

Question: 3. Hydrogen is preferred as better coolant in comparison to CO_2 because former

Option A. Is lighter

Option B. Is inert

Option C. Has high specific heat

Option D. Is a good conductor

Question: 4. The size of the reactor is said to be critical when

Option A. Chain reaction can be initiated

Option B. It becomes uncontrollable

Option C. It explodes

Option D. It produces no power

Question: 5. Reactors for propulsion applications use

Option A. Natural uranium

Option B. Molten lead

Option C. Any form of uranium

Option D. Thorium

Question: 6. In natural uranium, the constituents of three naturally occurring isotopes are

Option A. $U_{234} = 0.006\%$, $U_{235} = 0.712\%$ and $U_{238} = 99.282\%$

Option B. $U_{234} = 0.712\%$, $U_{235} = 0.006\%$ and $U_{238} = 99.282\%$

Option C. $U_{234} = 99.282\%$, $U_{235} = 0.006\%$ and $U_{238} = 0.712\%$

Option D. $U_{234} = 0.006\%$, $U_{235} = 99.282\%$ and $U_{238} = 0.712\%$

Question: 7. Pressurised water reactor is designed

- Option A. For boiling pi water in the core
- Option B. To use liquid sodium metal as coolant
- Option C. To use intermediate coolant
- Option D. To prevent the water coolant from boiling in the core

Question: 8. The function of control rods in nuclear plants is to

- Option A. Control temperature
- Option B. Control radioactive pollution
- Option C. Control absorption of neutron
- Option D. Control fuel consumption

Question: 9. The most practical fuel for a thermonuclear reactor, both from economical and nuclear consideration is

- Option A. Plutonium
- Option B. Uranium
- Option C. Deuterium
- Option D. Thorium

Question: 10. Where reactor operation is designed with fast neutrons such as in reactors using highly enriched fuel, the moderator used is

- Option A. Heavy water
- Option B. Graphite
- Option C. Carbon dioxide
- Option D. No moderator is needed

Question: 11. U235 will undergo fission by

- Option A. High energy (fast) neutrons alone
- Option B. Low energy (slow) neutrons alone
- Option C. Either fast or slow neutrons
- Option D. Medium energy neutrons

Question: 12. Half life of a radioactive isotope corresponds to the time required for half of the following to decay

- Option A. Electrons
- Option B. Protons
- Option C. Neutrons
- Option D. Atom

Question: 13. The nuclear energy is measured as

- Option A. MeV
- Option B. Curie
- Option C. Farads
- Option D. MW

Question: 14. When a reactor becomes critical, then the production of neutrons is

- Option A. Infinite
- Option B. Zero
- Option C. Exactly balanced by the loss of neutrons through leakage
- Option D. Initiated

Question: 15. Reflector in nuclear power plants _____ neutron leakage.

- Option A. Increases
- Option B. Decreases
- Option C. Have no effect on
- Option D. None of these

Question: 16. Nuclear reactors are used

- Option A. To produce heat for thermoelectric power
- Option B. To produce fissionable material
- Option C. To propel ships, submarines, aircrafts
- Option D. All of these

Question: 17. Pick up the wrong statement fast breeder reactors

- Option A. Operate at extremely high power densities.
- Option B. Are liquid metal cooled
- Option C. Produce more fuel than they consume
- Option D. Use water as coolant

Question: 18. The control rods in the control system of nuclear reactors are used to

- Option A. Absorb excess neutrons
- Option B. Control fuel consumption
- Option C. Control temperature
- Option D. All of these

Question: 19. The commonly used material for shielding is

- Option A. Lead or concrete
- Option B. Lead and tin
- Option C. Graphite or cadmium
- Option D. Thick galvanised sheets

Question: 20. In triggering fission, the following types of neutrons are desirable

- Option A. Fast moving
- Option B. Slow moving
- Option C. Critical neutrons
- Option D. Neutrons at rest

Question: 21. The nuclear radiators produced in a reactor which must be shielded are

- Option A. Electrons
- Option B. α , β and γ rays
- Option C. Neutron and gamma rays
- Option D. None of these

Question: 22. Effective moderators are those materials which contain

- Option A. Light weight atoms
- Option B. Heavy weight atoms
- Option C. Critical atoms
- Option D. Zero weight atoms

Question: 23. The energy released during the fission of one atom of Uranium 235 in million electron volts is about

- Option A. 100
- Option B. 200
- Option C. 300
- Option D. 400

Question: 24. Reflector in nuclear plants is used to

- Option A. Return the neutrons back into the core
- Option B. Shield the radioactivity completely
- Option C. Check pollution
- Option D. Conserve energy

Question: 25. The most commonly used moderator in nuclear plants is

- Option A. Heavy water
- Option B. Concrete and bricks
- Option C. Graphite and concrete
- Option D. Graphite

Question: 26. Which is not identical for an atom and an isotope?

- Option A. Mass number
- Option B. Atomic number
- Option C. Chemical properties
- Option D. Position in periodic table

Question: 27. Which of the following type of pump is used in liquid metal cooled reactor for circulation of liquid metal

- Option A. Centrifugal
- Option B. Axial
- Option C. Reciprocation

Option D. Electromagnetic

Question: 28. Natural uranium is made up of

Option A. 99.282% U_{238} , 0.712% U_{235} , 0.006% U_{234}

Option B. 99.282% U_{235} , 0.712% U_{238} , 0.06% U_{234}

Option C. 99.282% U_{234} , 0.712% U_{238} , 0.006% U_{235}

Option D. 99.282% U_{235} , 0.712% U_{234} , 0.006% U_{238}

Question: 29. The secondary fuel used in nuclear power plants is

Option A. U_{233} and Pu_{239}

Option B. U_{235} and Th_{232}

Option C. U_{235} and Pu_{238}

Option D. U_{233} and Pu_{238}

Question: 30. In the breeder reactors the generation of new fissionable atom is

Option A. At the lower rate than the consumption

Option B. At a higher rate than the consumption

Option C. At an equal rate of the consumption

Option D. Depends on other considerations

Answer Sheet

1	D	
2	B	
3	C	
4	A	
5	B	
6	A	
7	D	
8	C	
9	C	
10	D	
11	C	
12	D	
13	A	
14	C	
15	B	
16	D	
17	D	
18	A	
19	A	
20	B	
21	C	
22	A	
23	B	
24	A	
25	D	
26	A	
27	D	
28	A	
29	A	
30	B	